

Work Order ID 109746

November-28-13 7:34:47 AM

\*109746\*

Page 1

Item ID: D2580-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: -205 Bent Tube

Start Date: 11/28/13 Start Qty: 4.00

\*4\*

Cust Item ID:

Required Date: 12/12/13 Req'd Qty: 4.00

\*4\*

Customer:

Reference:

Approvals: Process Plan: ML5 Date: 13-11-28 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2580

F

0.00

100

\*1000\*

Skid tubes

Skid tubes

Memo

0.00

1- Inspect mat'l D2500-1-190 for damage.

2-Drill pilot holes using drill jig DT 8149 A-BC-D

3-Open holes to 0.508" as per Dwg D2580.

4-Deburr holes per QSI002 section 4.2.3 and blow out all chips from inside of tube

5- Test fit inspection saddles on FWD & AFT saddle holes using DT9916.

13-11-28 DGA/MM

101

QC6- Inspect dimensions to drawing

0.00

\*101\*

QC

Memo

0.00

Quality Control

13-11-28



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\*109746\*

Page 2

Item ID: D2580-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: 205 Bent Tube

Start Date: 11/28/13 Start Qty: 4.00

\*4\*

Cust Item ID:

Required Date: 12/12/13 Req'd Qty: 4.00

\*4\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

110

Chemical Conversion Coat per QSI005 4.1

0.00

\*110\*

Hand Finish

Memo

0.00

Hand Finishing

120

QC7-Inspect Chemical Conversion Coat

0.00

\*120\*

QC

Memo

0.00

Quality Control

125

0.00

\*125\*

Skid tubes

Memo

0.00

Skid tubes

1- Bond web in place per QSI 015.

A/R Sikaflex-291 batch: ~~123~~ 127317

Sikaflex expire date: 14-8-16

Start time and date: 4pm bond for 12hrs

4 / 13-11-28 DGL

DGL 13-11-28

DGL

13-11-28

# Work Order ID 109746

November-28-13 7:34:47 AM

**\*109746\***

Page 3

Item ID: D2580-1

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: 205 Bent Tube

Start Date: 11/28/13 Start Qty: 4.00

**\*4\***

Cust Item ID:

Required Date: 12/12/13 Req'd Qty: 4.00

**\*4\***

Customer:

Reference:

Run Start

**\*NR1\***

Stop

**\*NR2\***

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

QC5- Inspect part completeness to step on W/O

0.00


**\*130\***

QC

Memo

0.00

Quality Control

4 0 13-11-29 

140

Identify as per dwg & Stock Location: 46

0.00

**\*140\***

Packaging

Memo

0.00

Packaging

ND 13-11-29 (4)

150

QC21- Final Inspection - Work Order Release

0.00

**\*150\***

QC

Memo

0.00

Quality Control

AF/rm 13/11/29  
Lmk 13-11-29

# Picklist Print

November-28-13 7:34:51 AM

Page 1 / 1

Work Order ID: 109746

\*109746\*

Parent Item: D2580-1

\*D2580-1\*

Parent Item Name: 205 Bent Tube

Start Date: 11/28/13

Required Date: 12/12/13

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP B01.11.08 Revised Step 9, 10, 12, and 13 SM IPP Rev:C  
10.12.01 as per DEO D1 DD verfec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D2500-1-190

Manufactured

No

100

Each

108.0000

1

4

\*D2500-1-190\*

Ext'n - 1" Beam Tube 4"

\*\*

DGL 13-11-28

Location

Loc Qty

Loc Code

HALL

108

105279

83

99280

25

D2596

Manufactured

No

100

Each

11.0000

1

4

\*D2596\*

Web 205 Skidtube

\*\*

ND 13-11-28

Location

Loc Qty

Loc Code

LG002

11

103741

4

109313

4

80820

1

95599

2

4

LIST OF MATERIALS					DESCRIPTION
ITEM	QTY -041	QTY -045	QTY -047	PART NUMBER	
1	X			D2580-041	SKIDTUBE ASSEMBLY
2		X		D2580-045	SKIDTUBE ASSEMBLY
3			X	D2580-047	SKIDTUBE ASSEMBLY
4	1	1	1	D2500-1-190	EXTRUSION
5			16	D2570	BUSHING
6	1	1	1	D2576-3	STEP
7		4		D2579	SPACER
8	16	16	8	D2594-1	PLUG
9	16	16	8	D2594-3	O-RING
10	1	1	1	D2596	205 WEB
11	1	1	1	D2855	AFT CAP
12	1	1		D3564-5	WEARSHOE
13	1	1		D3564-9	WEARSHOE
14	1	1		D3564-11	WEARSHOE
15	1	1		D3564-13	WEARSHOE
16	2	2		D3566-1	GASKET
17	1	1		D3566-5	GASKET
18	1	1		D3566-13	GASKET
19	20	20	24	D4202-1	SPACER
20			1	D4406-041	WEARPLATE ASSEMBLY
21			1	D4406-043	WEARPLATE ASSEMBLY
22	50	50		ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
23	50	50		AN3C4A	BOLT
24	2	2	2	AN3-5A	BOLT
25			8	AN4-45A	BOLT
26	50	50		NAS1149C0332R	WASHER (AN960C10L)
27	2	2	2	NAS1149D0332J	WASHER (AN960JD10L)
28			8	MS21042-4	NUT (OR MS21042L4)

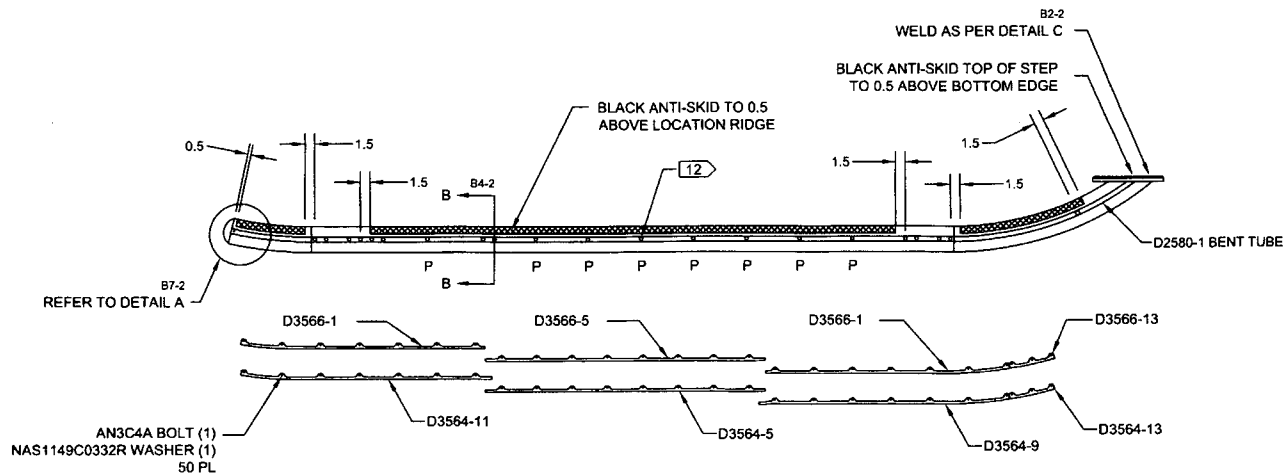
# GENERAL NOTES:

- MATERIAL: N/A
- FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ASSEMBLY (-041/-047) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.2  
POWDER COAT ASSEMBLY (-045) GREEN SANDEX (REF 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4.
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- IDENTIFICATION: NONE
- WEIGHT: D2580-041 = 34.5 lbs  
D2580-045 = 34.5 lbs  
D2580-047 = 37.7 lbs
- WELDING PER DART QSI 004
- INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-291.
- INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047)
- IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

RELEASED  
2013-07-13

F	INCORPORATE DEO D2580-E-1 PER PAR12-218	DC	13.06.20
E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DC		
CHECKED	RF	DRAWING NO.	REV. F
MFG. APPR.	DD	D2580	SHEET 1 OF 8
APPROVED	HS	TITLE	SCALE
DE APPR.	#	205 SKIDTUBE ASSEMBLY	NTS
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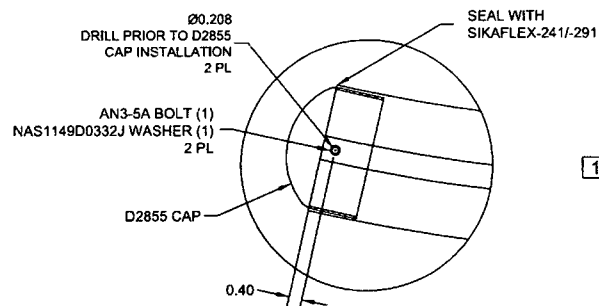
109746 MLC  
13-11-28



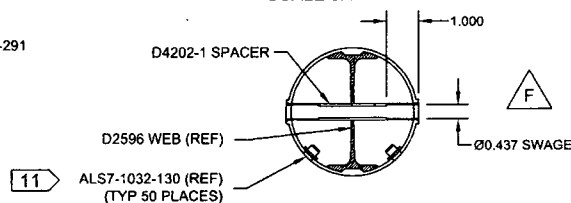
D2580-041 ASSEMBLY DETAIL

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2013-07-15

DETAIL A C7-2  
SCALE 5X

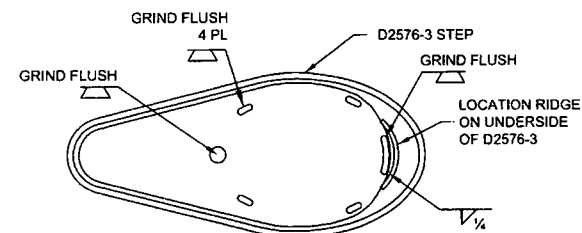


SECTION B-B D5-2  
SCALE 5X

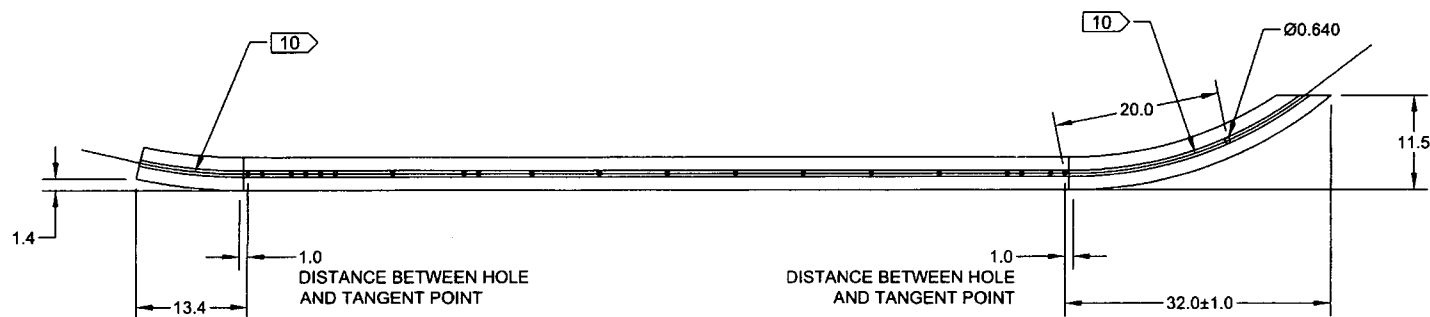


- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. INSERT D4202-1 SPACER (20 PLACES)
  2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
  3. TRIM / GRIND FLUSH PER QSI 002

DETAIL C D3-2  
SCALE 5X



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DRAWN	DC	HAWKESBURY, ONTARIO, CANADA	
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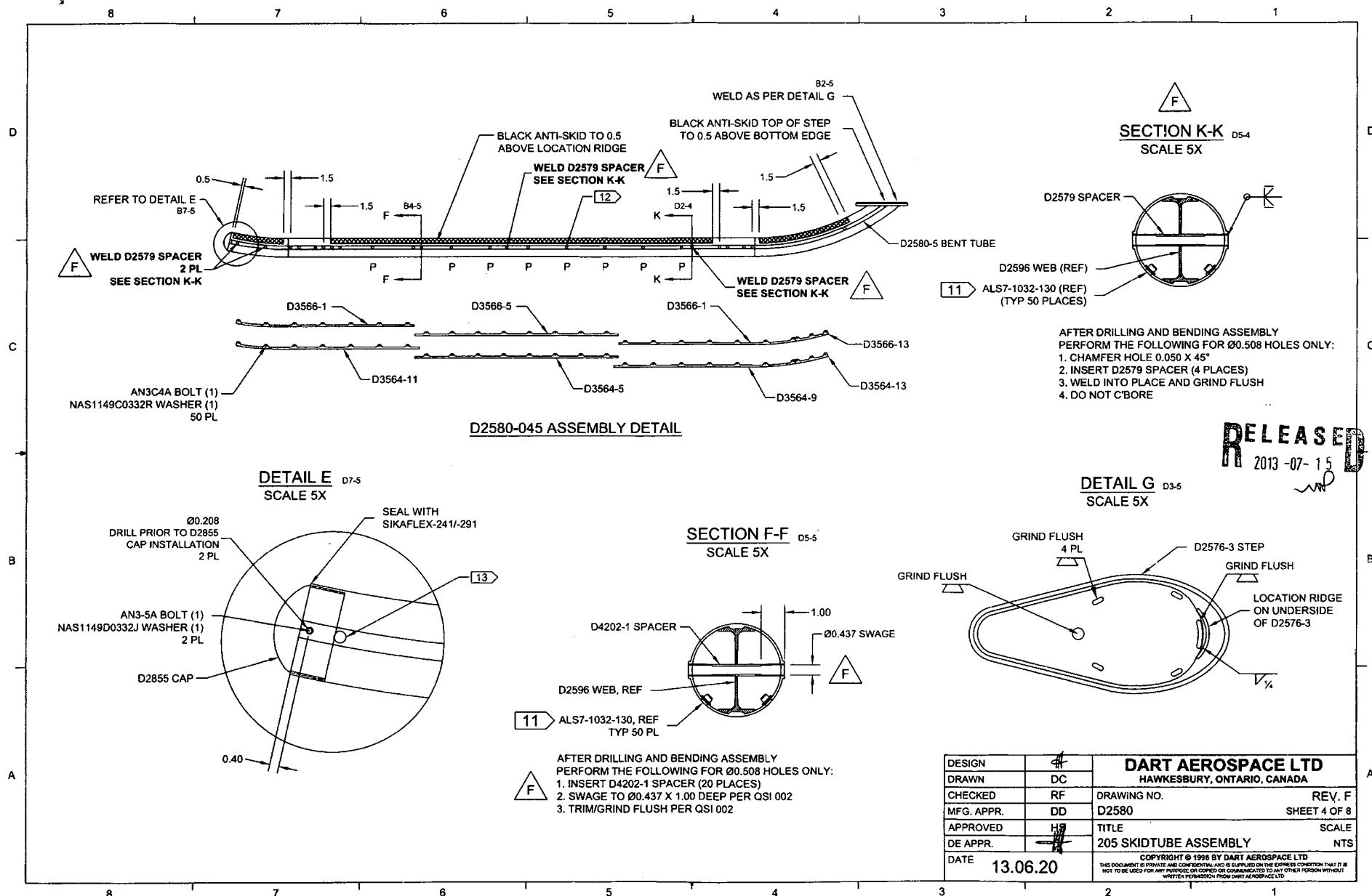
D2580-1 BENT TUBE  
(MAKE FROM D2580-101 TUBE)

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2013-07-15

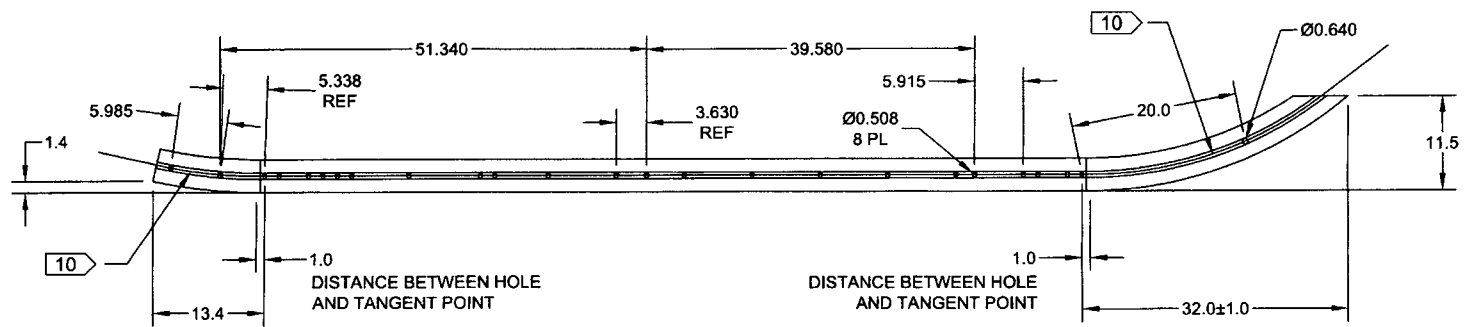
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DRAWN	RF		
CHECKED	DD	DRAWING NO.	REV. F
MFG. APPR.	HS	D2580	SHEET 3 OF 8
DE APPR.	13.06.20	TITLE	SCALE
		205 SKIDTUBE ASSEMBLY	NTS
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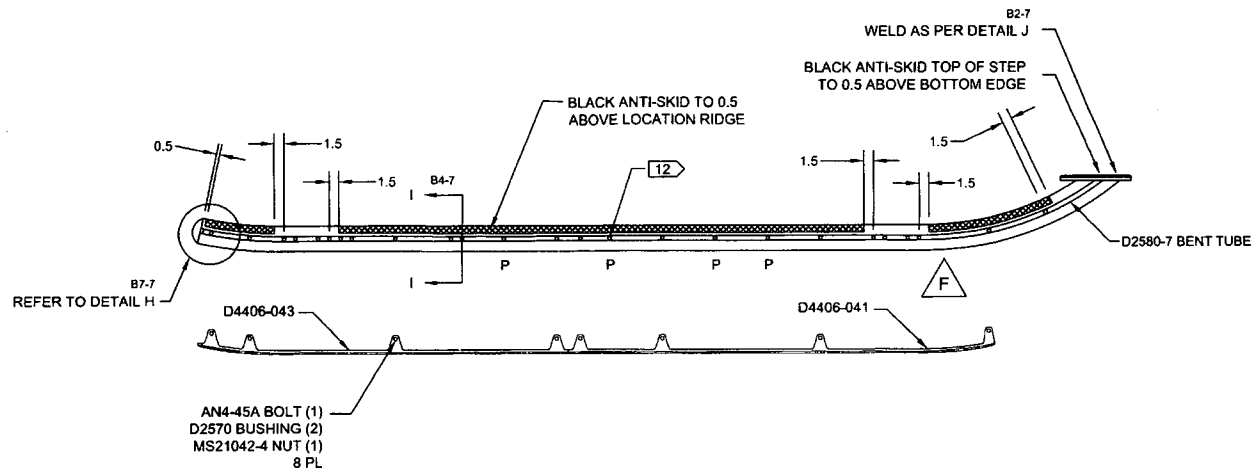




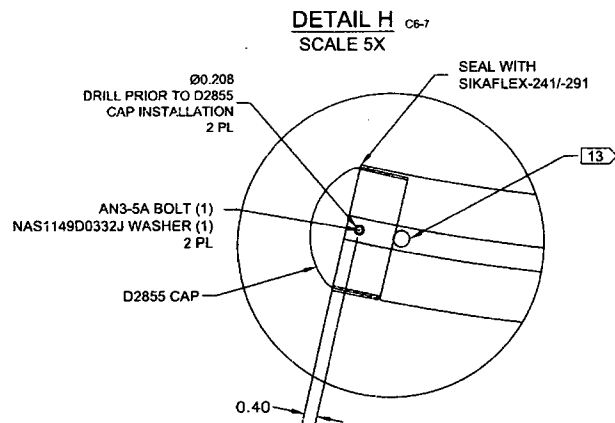
**D2580-5 BENT TUBE**  
(MAKE FROM D2580-101 TUBE)

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2013-07-15  
ND

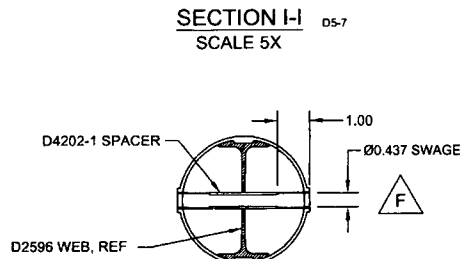
DESIGN	CH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	DC		
CHECKED	RF	DRAWING NO.	REV. F
MFG. APPR.	DD	D2580	SHEET 5 OF 8
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DE APPR.	#	205 SKIDTUBE ASSEMBLY	NTS
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**D2580-047 ASSEMBLY DETAIL**

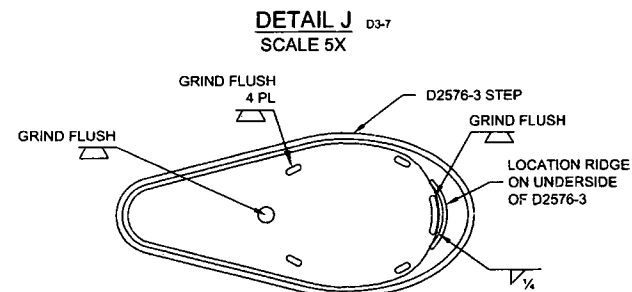


**DETAIL H**  
SCALE 5X



**SECTION I-I**  
SCALE 5X

- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. INSERT D4202-1 SPACER (24 PLACES)
  2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
  3. TRIM/GRIND FLUSH PER QSI 002

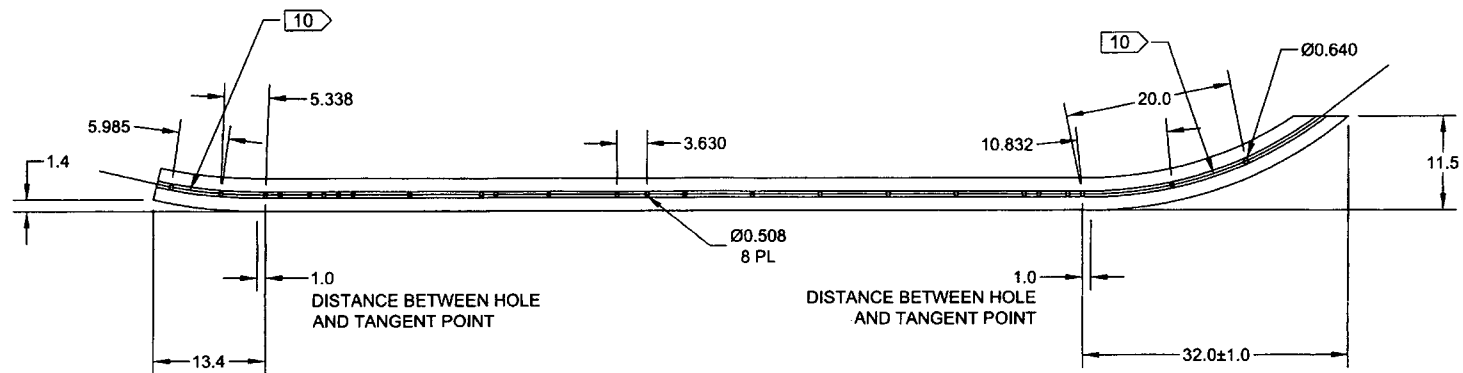


**DETAIL J**  
SCALE 5X

DESIGN	4	<b>DART AEROSPACE LTD</b>	
DRAWN	DC	HAWKESBURY, ONTARIO, CANADA	
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MFG. APPR.	DD	D2580	SHEET 6 OF 8
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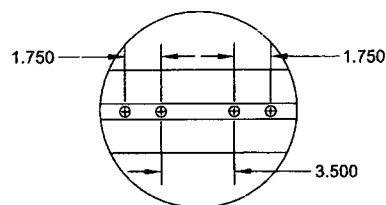
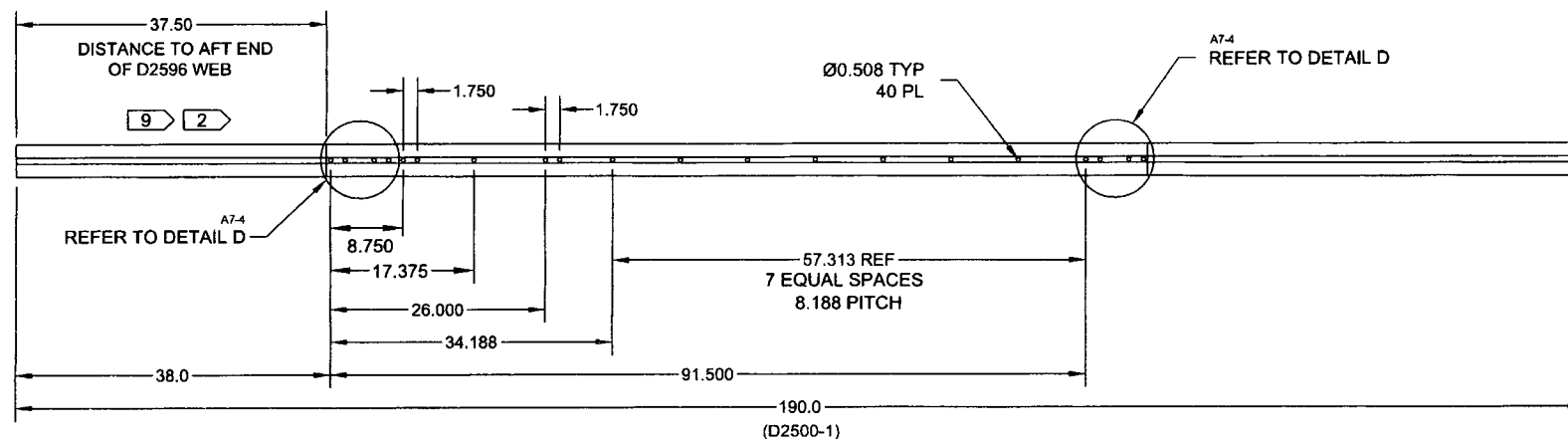




**D2580-7 BENT TUBE**  
(MAKE FROM D2580-101 TUBE)

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2013-07-15

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MFG. APPR.	DD	D2580	SHEET 7 OF 8
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**DETAIL D** D3-4  
SCALE 5X C7-4

D2580-101 TUBE

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2013-07-15  
JNP

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CHECKED	RF	DRAWING NO.	REV. F
MFG. APPR.	DD	D2580	SHEET 8 OF 8
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